IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1.   (currently amended) An information recording and reproduction processing apparatus that executes data recording and reproduction processing, comprising:

storing means for data recording;

a recording control process execution unit that generates reproduction management information including at least data recording end position information and executes data recording control for the storing means; and

a reproduction control process execution unit that executes reproduction control processing for data, which is read out from the storing means, on the basis of the reproduction management information, ~~characterized in that~~

the recording control process execution unit ~~has a constitution for, in the case of data recording processing,~~ being operable to generat~~ing~~e reproduction synchronization management information indicating that recording ~~processing~~ ~~for~~of data is in progress, to associat~~ing~~e the reproduction synchronization management information with the reproduction management information, and ~~executing processing for~~to record~~ing~~ the ~~generated~~ reproduction synchronization management information in a directory that is automatically erased ~~at the time of system startup or at the time of system shutdown~~, and

the reproduction control process execution unit ~~is constituted~~being operable to~~, in the case of data reproduction processing,~~ extract reproduction management information corresponding to reproduction data, ~~execute~~to retriev~~al~~e ~~processing for~~ reproduction synchronization management information based upon the extracted reproduction management information, to judge whether data is being recorded on the

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basis of the presence or absence of the retrieved reproduction synchronization management information, and to execute data reproduction control according to a result of the judgment.

2. (currently amended) An information recording and reproduction processing apparatus according to claim 1, ~~characterized in that~~wherein

the recording control process execution unit is ~~constituted~~operable to ~~execute processing for~~ stor~~ing~~e the reproduction synchronization management information in a volatile memory.

3. (currently amended) An information recording and reproduction processing apparatus according to claim 1, ~~characterized in that~~wherein

the recording control process execution unit is ~~constituted~~operable to ~~execute processing for~~ set~~ting~~ a reproduction synchronization management information name~~, which is set~~ in the reproduction synchronization management information~~,~~ as a file name that can be identified uniquely from ~~the~~a reproduction management information name, and

the reproduction control process execution unit is ~~constituted~~operable to specify ~~a~~the reproduction synchronization management information name on the basis of the reproduction management information name and ~~execute~~to retrieval~~e processing for~~ reproduction synchronization management information on the basis of the reproduction synchronization management information name.

4. (currently amended) An information recording and reproduction processing apparatus according to claim 1, ~~characterized in that~~wherein

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the information recording and reproduction processing apparatus has an upper layer process execution unit that executes setting processing for the recording control process,

_____the recording control process execution unit is ~~constituted~~ operable to generate an identifier (ID) with which the reproduction management information can be identified uniquely and to output the ~~generated~~ identifier to an upper process execution unit,

the upper layer process execution unit is ~~constituted~~operable to ~~execute processing for~~ stor~~ing~~e the identifier (ID) in a storage unit and to manag~~ing~~e the identifier, and

the reproduction control process execution unit is ~~constituted~~operable to ~~execute processing for~~ input~~ting~~ the identifier (ID) from the upper process execution unit and to acquir~~ing~~e the reproduction management information on the basis of the identifier (ID).

5. (currently amended) An information recording and reproduction processing apparatus according to claim 1, ~~characterized in that~~wherein

the storing means includes a nonvolatile memory, and

the recording control process execution unit is ~~constituted~~operable to ~~execute~~ record~~ing of~~ data to be an object of reproduction ~~processing with respect~~ to the ~~storing means constituted by a~~ nonvolatile memory and ~~execute processing for~~ to stor~~ing~~e the reproduction synchronization management information in a volatile memory different from the storing means.

6. (currently amended) An information recording and reproduction processing apparatus according to claim 1, ~~characterized in that~~wherein

~~the reproduction control processing execution unit is~~
~~constituted to, in the case in which~~ when reproduction
synchronization management information is detected, <u>the</u>
<u>reproduction control processing execution unit is operable to</u>
judge that data recording ~~processing~~ is in progress, <u>and to</u>
execute control for reproduction processing while confirming an
update state of a recording end ~~point~~<u>position</u> in <u>the</u>
reproduction management information, and~~, in the case in which~~

when a reproduction position reaches the recording end
~~point~~<u>position</u> in the reproduction management information, <u>the</u>
<u>reproduction control process execution unit is operable to</u>
perform <u>a</u> reproduction suspension process~~ing~~.

7.   (currently amended) An information recording and
reproduction processing apparatus according to claim 1,
~~characterized in that~~<u>wherein</u>

~~the reproduction control process execution unit is~~
~~constituted to, in the case in which~~ when reproduction
synchronization management information is not detected, <u>the</u>
<u>reproduction control process execution unit is operable to</u> judge
that data recording ~~processing~~ is not in progress, <u>and to</u>
execute reproduction control for data as recorded data, and~~, in~~
~~the case in which~~

when a reproduction position reaches a recording end
~~point~~<u>position</u> in <u>the</u> reproduction management information, <u>the</u>
<u>reproduction control process execution unit is operable</u> ~~execute~~
~~control for~~<u>to</u> shift~~ing~~ to <u>a</u> reproduction ending process~~ing~~.

8.   (currently amended) An information recording and
reproduction processing apparatus according to claim 1,
~~characterized in that~~<u>wherein</u>

~~the reproduction control process execution unit is~~
~~constituted to, in the case in which~~ when reproduction

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synchronization management information is detected, <u>the</u> <u>reproduction control process execution unit is operable to</u> periodically verify <u>the</u> presence or absence of the reproduction synchronization management information, ~~in the case in which~~

<u>   when</u> the reproduction synchronization management information is erased, <u>the reproduction control process</u> <u>execution unit is operable to</u> execute reproduction control for data as recorded data, and~~, in the case in which~~

<u>   when</u> a reproduction position reaches a recording end ~~point~~<u>position</u> in <u>the</u> reproduction management information, <u>the</u> <u>reproduction control process execution unit is operable to</u> ~~execute control for~~ shift~~ing~~ to <u>a</u> reproduction ending process~~ing~~.

9.   (currently amended) An information recording and reproduction processing apparatus that executes data recording and reproduction processing, comprising:

storing means for data recording;

a recording control process execution unit that generates reproduction management information including at least data recording end position information and executes data recording control for the storing means; and

a reproduction control process execution unit that executes reproduction control processing for data, which is read out from the storing means, on the basis of the reproduction management information, ~~characterized in that~~

the recording control process execution unit <u>being</u> <u>operable to</u> ~~has a constitution for, in the case of data~~ ~~recording processing, executing processing for~~ generat~~ing~~<u>e</u> reproduction synchronization management information indicating that recording ~~processing for~~<u>of</u> data is in progress and recording management information having link information ~~of~~<u>for</u> the reproduction synchronization management information<u>,</u> ~~and~~ <u>to</u>

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stor~~ing~~e the ~~generated~~ reproduction synchronization management information and the recording management information in storing means,~~ and~~

~~executing~~ to retrieval~~e~~ ~~processing for~~ recording management information including link information~~at the time of system startup~~, to extract~~ing~~ and eras~~ing~~e reproduction synchronization management information on the basis of the retrieved link information~~ of extracted recording management information~~, and to ~~executing~~ eras~~ing~~e ~~processing for~~ the ~~extracted~~retrieved recording management information, and

the reproduction control process execution unit being operable to~~is constituted to, in the case of data reproduction processing,~~ extract reproduction management information corresponding to reproduction data, ~~execute~~ to retrieval~~e~~ ~~processing for~~ reproduction synchronization management information based upon the extracted reproduction management information, to judge whether data is being recorded on the basis of the presence or absence of the retrieved reproduction synchronization management information, and to execute data reproduction control according to a result of the judgment.

10. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

the storing means includes a nonvolatile memory, and

the recording control process execution unit is ~~constituted~~operable to ~~execute~~ record~~ing of~~ data to be an object of reproduction and to record~~ing of~~ the reproduction synchronization management information and the recording management information ~~with respect~~ to the ~~storing means constituted by a~~nonvolatile memory.

11. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

the recording control process execution unit is ~~constituted~~operable to ~~execute processing for~~ setting a reproduction synchronization management information name~~, which is set~~ in the reproduction synchronization management information~~,~~ as a file name that can be identified uniquely from ~~the~~a reproduction management information name, and

the reproduction control process execution unit is ~~constituted~~operable to specify ~~a~~the reproduction synchronization management information name on the basis of the reproduction management information name and ~~execute~~to retrieval~~e processing for~~ reproduction synchronization management information on the basis of the reproduction synchronization management information name.

12. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

the information recording and reproduction processing apparatus has an upper layer process execution unit that executes setting processing for the recording control process,

the recording control process execution unit is ~~constituted~~operable to generate an identifier (ID) with which the reproduction management information can be identified uniquely and to output the ~~generated~~ identifier to an upper process execution unit,

the upper layer process execution unit is ~~constituted~~operable to ~~execute processing for~~ stor~~ing~~e the identifier (ID) in a storage unit and to manag~~ing~~e the identifier, and

the reproduction control process execution unit is ~~constituted~~operable to ~~execute processing for~~ input~~ting~~ the identifier (ID) from the upper process execution unit and to acquir~~ing~~e the reproduction management information on the basis of the identifier (ID).

13. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

~~the reproduction control processing execution unit is constituted to, in the case in which~~ when reproduction synchronization management information is detected, the reproduction control process execution unit is operable to judge that data recording ~~processing~~ is in progress, and to execute control for reproduction processing while confirming an update state of a recording end ~~point~~position in the reproduction management information, and~~, in the case in which~~

when a reproduction position reaches the recording end ~~point~~position in the reproduction management information, the reproduction control process execution unit is operable to perform a reproduction suspension process~~ing~~.

14. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

~~the reproduction control process execution unit is constituted to, in the case in which~~ when reproduction synchronization management information is not detected, the reproduction control process execution unit is operable to judge that data recording ~~processing~~ is not in progress, and to execute reproduction control for data as recorded data, and~~, in the case in which~~

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_____when_ a reproduction position reaches a recording end ~~point~~position in _the_ reproduction management information, _the reproduction control process execution unit is operable to_ ~~execute control for~~ shift~~ing~~ to _a_ reproduction ending process~~ing~~.

15. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

~~the reproduction control process execution unit is constituted to, in the case in which~~ _when_ reproduction synchronization management information is detected, _the reproduction control process execution unit is operable to_ periodically verify _the_ presence or absence of the reproduction synchronization management information,_ ~~in the case in which~~

_____when_____ the reproduction synchronization management information is erased, _the reproduction control process execution unit is operable to_ execute reproduction control for data as recorded data, and~~, in the case in which~~

_____when_ a reproduction position reaches a recording end ~~point~~position in _the_ reproduction management information,_ _the reproduction control process execution unit is operable to_ ~~execute control for~~ shift~~ing~~ to _a_ reproduction ending process~~ing~~.

16. (currently amended) An information recording processing method for executing data recording processing, ~~characterized by~~ _the method_ comprising:

~~a reproduction synchronization management information generation step of, in the case of data recording processing,~~ generating reproduction synchronization management information indicating that recording ~~processing for~~of data is in progress;

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~~an association processing step of~~ associating the reproduction synchronization management information ~~to~~with the reproduction management information; and

~~a reproduction synchronization management information recording step of executing processing for~~ recording the reproduction synchronization management information in a directory that is automatically erased ~~at the time of system startup or at the time of system shutdown~~.

17. (currently amended) An information recording processing method according to claim 16, ~~characterized in that~~wherein

the ~~reproduction synchronization management information~~recording step ~~is a step of executing processing for~~ includes storing the reproduction synchronization management information in a volatile memory.

18. (currently amended) An information recording processing method according to claim 16, ~~characterized in that~~wherein

the ~~association~~associating~~processing~~ step ~~is a step of executing processing for~~includes setting a reproduction synchronization management information name~~, which is set~~ in the reproduction synchronization management information~~,~~ as a file name that can be identified uniquely from ~~the~~a reproduction management information name.

19. (currently amended) An information recording processing method according to claim 16, ~~characterized in that~~

~~the information recording processing method~~ further ~~comprises~~ing:

~~a step of~~ generating an identifier (ID) with which the reproduction management information can be identified uniquely

and outputting the ~~generated~~ identifier to an upper <u>layer</u> process execution unit; and

a ~~step of~~ storing the identifier (ID) in a storing unit and managing the identifier in the upper layer process execution unit.

20. (currently amended) An information recording processing method for executing data recording processing, ~~characterized by~~ <u>the method</u> comprising:

a ~~management information generation step of, in the case of data recording processing,~~ generating reproduction synchronization management information indicating that recording ~~processing for~~<u>of</u> data is in progress and recording management information having link information ~~of~~<u>for</u> the reproduction synchronization management information;

a ~~management information recording processing step of~~ storing the ~~generated~~ reproduction synchronization management information and <u>the</u> recording management information in storing means; and

a ~~management information erasing step of, at the time of system start up, executing retrieval~~<u>retrieving</u> ~~processing for~~ recording management information <u>including link information</u>, extracting and erasing reproduction synchronization management information on the basis of <u>the retrieved</u> link information ~~of extracted recording management information~~, and ~~executing~~ erasing ~~processing for~~ the ~~extracted~~<u>retrieved</u> recording management information.

21. (currently amended) An information recording processing method according to claim 20, ~~characterized in that~~<u>wherein</u>

the ~~management information recording processing~~<u>storing</u> step ~~executes~~<u>includes</u> recording ~~of~~ data to be an object of

reproduction ~~processing~~ and recording ~~of~~ the reproduction synchronization management information and the recording management information ~~with respect~~ to ~~the storing means constituted by~~ a nonvolatile memory.

22.   (currently   amended)   An   information   recording processing method according to claim 20, ~~characterized in that~~further comprising:

~~the information recording processing method further comprises:~~

~~a step of~~ generating an identifier (ID) with which the reproduction management information can be identified uniquely and outputting the ~~generated~~ identifier to an upper layer process execution unit; and

~~a step of~~ storing the identifier (ID) in a storing unit and managing the identifier in the upper layer process execution unit.

23.   (cancelled)

24.   (cancelled)

25.   (cancelled)

26.   (cancelled)

27.   (cancelled)

28.   (cancelled)

29.   (currently amended) A computer program for executing a data recording process~~ing~~, ~~characterized by~~the process comprising:

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a reproduction synchronization management information generation step of, in the case of data recording processing, generating reproduction synchronization management information indicating that recording ~~processing for~~of data is in progress;

~~an association processing step of~~ associating the reproduction synchronization management information ~~to~~with the reproduction management information; and

a reproduction synchronization management information recording step of executing processing for recording the reproduction synchronization management information in a directory that is automatically erased ~~at the time of system startup or at the time of system shutdown~~.

30. (currently amended) A computer program for executing a data recording process~~ing~~, the process~~characterized by~~ comprising:

~~a management information generation step of, in the case of data recording processing,~~ generating reproduction synchronization management information indicating that recording ~~processing for~~of data is in progress and recording management information having link information ~~of~~for the reproduction synchronization management information;

~~a management information recording processing step of~~ storing the ~~generated~~ reproduction synchronization management information and the recording management information in storing means; and

~~a management information erasing step of, at the time of system start up, executing retrieval~~retrieving ~~processing for~~ recording management information including link information, extracting and erasing reproduction synchronization management information on the basis of the retrieved link information ~~of extracted recording management information~~, and ~~executing~~

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erasing ~~processing for~~ the ~~extracted~~<u>retrieved</u> recording management information.

31. (cancelled)